2: Becher--38 E-5 (1955-1956) 1960 SQ18 Yanoama SQ18

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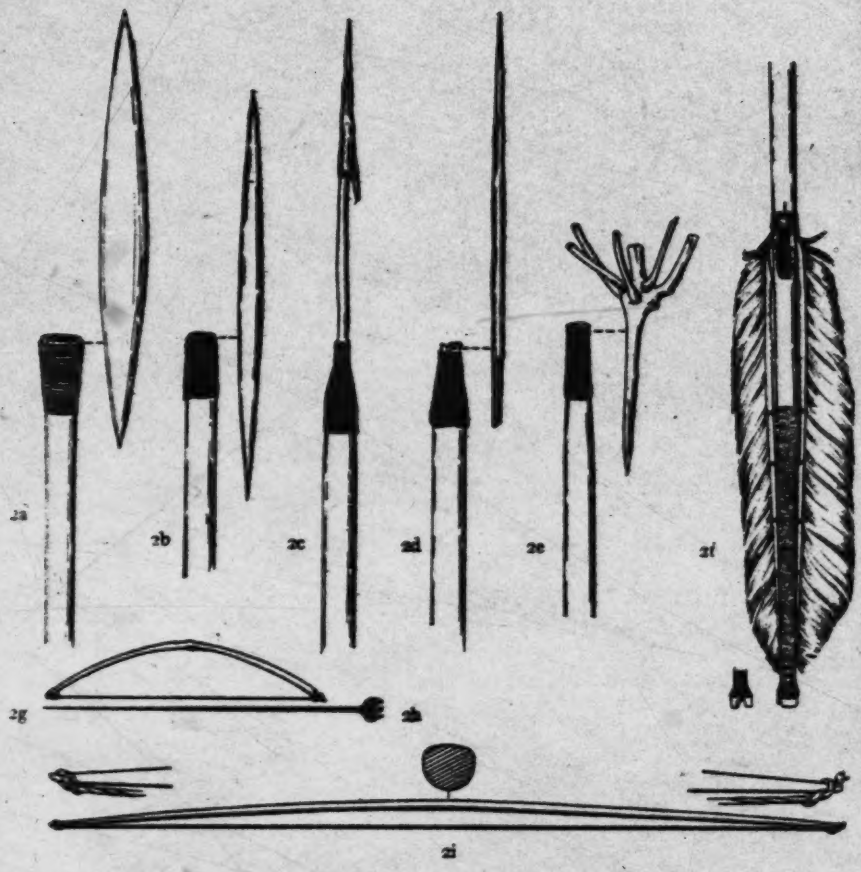

Fig. 2a. Wide, lancet-shaped bamboo arrow-point.
Fig. 2b. Narrow, lancet-shaped bamboo arrow-point.
Fig. 2c. Arrow-point with barb.
Fig. 2d. Wooden arrow-point with coating of poison.
Fig. 2e. Forked wooden arrow-point.
Fig. 2f. Arrow feathering.
Fig. 2g. Boy's bow.
Fig. 2h. Boy's arrow.
Fig. 2i. Bow with cross-section and string fastening.

Suráva
Pakidái

/29 cont./
and ridiculous (152) (153) (154).

152. Nimuendajú, 1914, pp. 321/22.

153. Becher, 1951, I, pp. 180/81;
II, plate and Map No. 18.

154. Becher, 1955, pp. 144/45.

On festival and ceremonial occasions, men, women, and children from the age of four on also tie over the hip cord a cotton belt -- nyõ -- (155), which is always open in front. As

155. It is the same word that is used to designate the cotton hammock.

a rule, the belts are made by the women; bachelors, however, must make their own.

These are the string belts typical for Guiana (156) (157),

156. Becher, 1951, I, p. 169.

157. Becher, 1955, p. 138.

which, however, take on an appearance somewhat different from the familiar form because of wrappings or cross-bindings. /Fig. 6 appears here./

All the men's and boys' belts are roll-shaped and have a length of 70-80 centimeters and 40-50 centimeters, respectively. The diameter for the former is 4-5 centimeters, and for the latter, 2-3 centimeters. They are very simple to make, for around two small sticks thrust into the ground, the distance between them determining the length of the belt, a long cotton thread is looped until a thick layer is finally obtained. This is then simply tightly wound with a thin string of cotton or

/29 cont./

292 curauá fibers at /30/ /Fig. 7 appears here/ intervals of 1.5-2
284 centimeters for men's belts and 0.5-1 centimeter for boys' belts, which produces bulges and grooves. Before the belt is slipped off the sticks, a small, two to five-strand twisted cord of cotton or curauá fibers is drawn through the openings and knotted into a loop by means of the two ends three to five centimeters long. These two loops are twisted into each other in front, over the abdomen, by the wearer, and the knots keep the belt secure (Fig. 6a and b, Ill. 23). After they are finished, serpentine lines, circles, or dots are painted on these belts with urucú, for which a small stick is used; often, however, they are colored red all over.

[531]
[386]

Fig. 6a
Men's belt, detail.

Fig. 6b
Men's belt, diagram.

292
184

Among the Waiká, Zerries found the same men's belts (158),

158. Zerries, 1956a, p. 184.

and from the photographs in other publications of this author it may be seen that they are worn in the same way as among the Surára and Pakidái (159) (160).

159. Zerries, 1955b, colored picture on jacket and photograph on p. 663, lower left.

160. Zerries, 1954b, Pl. VI, top.

/30 cont./

Surára
Pakidái

292
284

Fig. 7a
Young men's belt, detail.

Fig. 7b
Young men's belt, diagram.

Among the Surára and Pakidái, besides the men's and boys' belts, there is another special kind for young men, made with a plaiting technique. They are started in the manner described above, but after the layer of cotton is obtained, it is divided into two equally thick bundles which are tightly wound, alternately, at intervals of 1-1.5 centimeters. The belt therefore consists of two adjacent thin rolls of cotton, each two centimeters in diameter (Fig. 7a and b). Tie-strings and the wearing style correspond to the men's and boys' belts, as does the painting.

Women's and girls' belts are characterized by a wide, flat shape. The lengths vary between 55-70 centimeters and the widths between 6-8 centimeters for women's belts and 35-46 centimeters and 4-5 centimeters, respectively, for girls' belts. In making them, again two sticks are used, around which the cotton threads are wound. The resultant layer is divided into 6-8 equally thick bundles, each of which is wound with a cotton thread in the manner shown in Fig. 8a-c, and in this way the bunches of warp threads are held together. In other words, the longitudinal threads are held side by side by means of cross-bindings. The distance between these weft-threads is 2.5-3 centimeters for the belts of young women and

Surára
Pakidái
Puseheweteri

292 /30 cont./
284 girls and 0.5 centimeter for those of old women. This distinguishing feature was always pointed out to me. Tie strings and
292 the wearing style correspond in this case too with the men's belts,
53 as does the painting with urucú, which is applied on the outer
[386] side. As a result of their width, these belts are much easier to paint than those of the men. Most often one sees serpentine lines, occasionally circles are placed between them, and sometimes too the painting only consists of circles, or circles and dots (Fig. 9 a-e; Fig. 10 a-d); there are also belts, however, which are colored red all over.

292 Xiriána women who are married to Surára and Pakidái
184 men wear the same belts, as did the little captive of the Surára, Nikeromá, from the hostile tribe of the /31/ /Figs. 8 and 9 appear here/ /32/ /Fig. 10 appears here/ Karauaterí (Ills. 17 and
[192] 18). When I asked them the name of their belts, they gave me the designation -- nyõ -- which corresponds to the Surára and Pakidái word.

292 The Puseheweterí women gave me the same word, although
184 their belts have a somewhat different form (161). They are 60-
[192]

161. I saw them on the women of that tribe who were married to Surára and Pakidái men.

70 centimeters long and consist solely of a thick layer of cotton
292 which has been somewhat twisted together. In other words, it is
284 a very characteristic string-belt, that is, without wrappings or
184 cross-bindings. An additional little fringed apron, however, 22-26 centimeters long, is attached to a tie-string. To make it, 60 to 90 cotton strings, 14-18 centimeters long, are put over the tie-string. After that, starting from the left, the end of the first string hanging down in front is knotted with the one of the second hanging down in back and tightly twisted with it, then the front end of the second one with the rear end of the third, and so forth. The fringes hanging down are 7-9 centimeters long and, to assure firmness, are wound once more below the tie-string
292 with a thin cotton thread. When the belt is worn, the little
53
184

[text continues on p. 69]

2: Becher--68 E-5 (1955-1956) 1960 SQ18 Yanoama SQ18

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Fig. 8a-b. Part of a women's belt.

Fig. 8c. Part of a women's belt, diagram.

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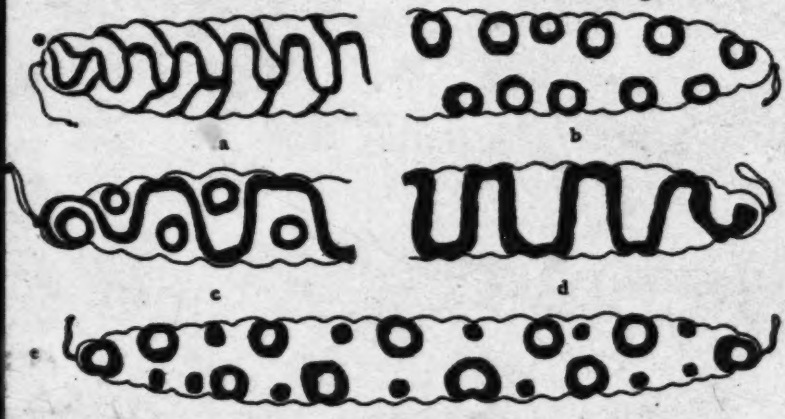

Fig. 9a-e. Various paintings from women's and girls' belts.

Puseheweteri
surára

/32 cont./

292
531
237

Fig. 11. Fringed belt of an old Puseheweterí woman, with pierced mussel shells.

291
[462]
[237] Finally, the Surára also use a child's belt -- yaoké -- which is always made by the father /33/ out of the skin of the maracajá (Felis pardalis Neuw.) -- yaó. These belts are 30-35 centimeters long and 2-2.5 centimeters wide. One end is pierced to receive a thin
● [284] tie-string of cotton or curauá fibers. The string is wound around the other end several times and then knotted (Fig. 12). This belt, too, is worn in such a way that it is open in front. Only now and then is it put on small boys and girls between 1-3 years old, who at that age, of course, do not even wear the hip cord (see p. 60), in order to promote their physical strength and growth. /34/

/38 cont./

301
[438]

200. (cont.)
centimeters wide. She likewise designated it for me with the name nyõ̃mutimá and added that she had obtained it from a Xiriána woman.

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The four Xiriána women whom I met in the malokas of the Surára and Pakidái wore the same cords and bands on their upper arms, wrists, and legs, like all the Puseheweterí and Aramamesterí women, including the captive Karauaterí girl. The latter, however, said that they had only adopted the upper-arm bands here, for in their tribes only upper-arm cords were used.

• [284]

Fig. 14a-b. Upper-arm string-band of the men.

Fig. 15a-b. Upper-arm string-band of the young men.

Fig. 16a-c. Upper-arm string-band of the women.

/38 cont./

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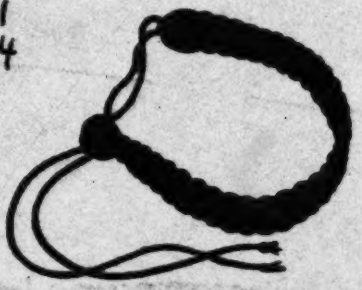

Fig. 17. Upper-arm string-band of the women.

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According to Koch-Grünberg, too, among the Xiriâna (Schirianá) the men wrap long, red-dyed cotton cords around their upper arms, while women use "narrow bands," which, however, they tie so tightly that the marks of them are seen even when they are removed (201). The women of the Maiongkong-Yekuaná bind

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171

201. Koch-Grünberg, 1923a, p. 305.

their upper arms in the same tight fashion (202). With reference

202. Koch-Grünberg, 1923b, Plates 151, 152, 170, 171, 172.

to the Arekunâ-Taulipang, Koch-Grünberg writes: "Among the ornaments of the women, moreover, there are wide wrappings of strings of white beads below the knees, around the upper arms and the wrists. The men /39/ wear the same bead ornaments around the wrists, sometimes also around the ankles, but bind the legs below the knees with white cotton cords, the ends of which hang far down. Around the upper arms they usually wear only a string of white beads or a white cotton cord or, on festive days, a round disk of snail shells... The bindings around the legs are frequently pulled so tightly by young girls, out of vanity, that the calves bulge out tautly" (203) (204).

203. Koch-Grünberg, 1923a, p. 34.

204. Koch-Grünberg, 1917, Ills. 7, 8.

/45 cont./

301 in most cases, a silver triangle, a large glass bead, or a fruit pit is fastened at the bottom.

301 439 When I came to the Surára and Pakidái, a few bead chains were already in use. According to their statements, they had obtained the glass beads from the Indian protection post Ajuricaba on the Rio Demini, from rubber and palm-fiber gatherers, and from the Xiriâna. The latter had presumably acquired this foreign commodity from Karaiben tribes who, for their part, had received it from the whites. This shows that the barter of glass beads is still carried on vigorously among the Indians themselves (245).

[114]

245. It was already observed by v. Martius that glass beads were traded over wide areas (von Martius, 1867, I, pp. 702 ff.), and Krause also points out that they are greatly prized as trade items (Krause, 1911, p. 279).

7. Hammocks

352 [824] The Surára and Pakidái have three different kinds of hammocks. The hammock of embira (tree bast, Malvaceae sp.) -- yâritanacîk -- whose length is between 1.80-1.90 meters, may probably be regarded as the oldest and most primitive form (Ill. 26). It has no weft and consists only of ten to 14 embira strips [284] 1-2 centimeters wide. These are bent over at the ends and tied together by means of two ropes 1.30-1.40 meters long, which at the same time serve for suspension (Fig. 18a and b). Both ropes are very strong and durable, for they have been plaited in the form of a braid out of three one-centimeter-wide /46/ /Fig. 18 appears [462] here/ strands of embira. The manufacture of this hammock is [824] extracrdinarily simple and is done only by men. From the embira [284] tree they remove 10-15 bast strips two meters long and 1-2 centimeters wide, which they tie together in the manner described above, after they have first plaited two ropes. To cut the tree [412] bast they use the little cutia-tooth knife (see p. 119). Since the yâritanacîk is extracrdinarily light, the men like to use it on their

Surára
Pakidái
Shiriana
waica

/46 cont./

352
284

Fig. 18a-b
Detail of the end fastening on a hammock of embira, as well as loop and knot diagram.

352 roving, hunting, and war expeditions as a travel hammock.
[482] Rolled up, it then hangs on their backs, held by a thin neck-cord
of cotton or curauá (Bromelia fiber). For sleeping they usually
[513] lie curled up in it; it takes practice and skill, however, not to
fall out.

352 Similar hammocks are also used by the Waiká, and there,
184 according to Zerries, they are supposed to fulfill certain functions
[114] in the ritual system (246) (247), whereas Schuster says that they

246. Zerries, 1955a, p. 87.

247. Zerries, 1956a, p. 184.

are made only in an emergency (248). The tree-bast hammocks

248. Schuster, 1958b, p. 16.

of the Xiriána are more highly developed, for they have a weft of cotton threads and plant fibers. Ruth Haebler describes two specimens in the ethnological museums in Berlin (VA 61119) and Leipzig (8736) (249).

249. Haebler, 1919, p. 12.

/46 cont./

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[192] Instead of the yâritanaçík (embira hammock), the Surára and Pakidái men, on their rovings and hunting and war expeditions, also /47/ frequently use a liana hammock -- totokë -- (254) (255),

254. The name is derived from tototó, with which the liana (cipó-titica) is designated.

255. Except for a slight dialectal difference, the name corresponds to the Waiká word -- "toto" --, with which, however, according to statements by Zerries, they designated their tree-bast hammocks (Zerries, 1955a, p. 87).

which is likewise very light but gives the sleeper a somewhat firmer support. The lengths of these hammocks vary between
[462] 1.90 and 2.10 meters. They, too, are without cross-bindings and are likewise made only by men. This is done as follows:
352 The man has a rather large bundle of long lianas lying in front
●284 of him. He splits each one with his teeth into 3-5 flat strips and places these side by side. When he has gathered as many strips as he can easily grasp with one hand, approximately 200-250, he winds a thick liana around the ends. Below the wrapping he then divides the flat strips into several bunches of equal size, each of which he winds twice with two split, twisted lianas (Fig. 19 and Fig. 20). This makes the bundle of strips wider at the ends. As tie ropes the man uses three lianas plaited like braids (Ill. 27).

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184 Such hammocks are likewise used by the Waiká (256) and

256. Schuster, 1958b, p. 16.

Xiriána, but the latter Indians sometimes provide them with cross-bindings of cotton strings (257).

257. Koch-Grünberg, 1923a, p. 314 and Pl. 46 (1).

/48 cont./

352 According to the classification by Max Schmidt,
286 who differentiates three groups for the plaiting tech-
174 nique in South America, the cotton hammocks made
171 by the Surára and Pakidái would belong to the second

• [284]

Fig. 19. End fastening of a liana hammock.

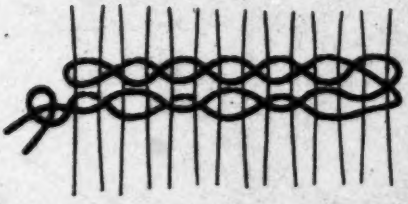

Fig. 20. Diagram of the interweaving of the end fastening of a liana hammock.

group, the double-thread plaiting, which the scholar characterizes as follows: "This plaiting method, which is widespread throughout America, North and South, is simply based, as the diagram in Fig. 115 shows, on two threads that are twisted around each other and are simultaneously, at each half twist around each other, wound around one of the bundles

412 /54 cont./
184 Zerries and Schuster, (297) (298), for the Karimé by Salathé (299).

297. Zerries, 1956a, p. 184.

298. Schuster, 1958b, p. 17.

299. Salathé, 1931/32, p. 306 and Fig. 16.

[237]

Fig. 25. Small knife made out of the sharp tooth of the cutia (Dasyprocta aguti L.).

Fig. 26. Knife made out of the ventral shell of the perema (water turtle).

[284] and for the Xiriâna by Koch-Grünberg (300). The latter, however,
[824]

300. Koch-Grünberg, 1923a, p. 313 and Pl. 47 (9).

says that the Xiriâna lash the tooth to a wooden handle by means of Bromelia fibers (301). In the same place Koch-Grünberg likewise

301. Such a knife is to be found in the Hamburg Museum für Völkerkunde und Vorgeschichte Koch-Grünberg Collection, 12.25:108).

[P.122]

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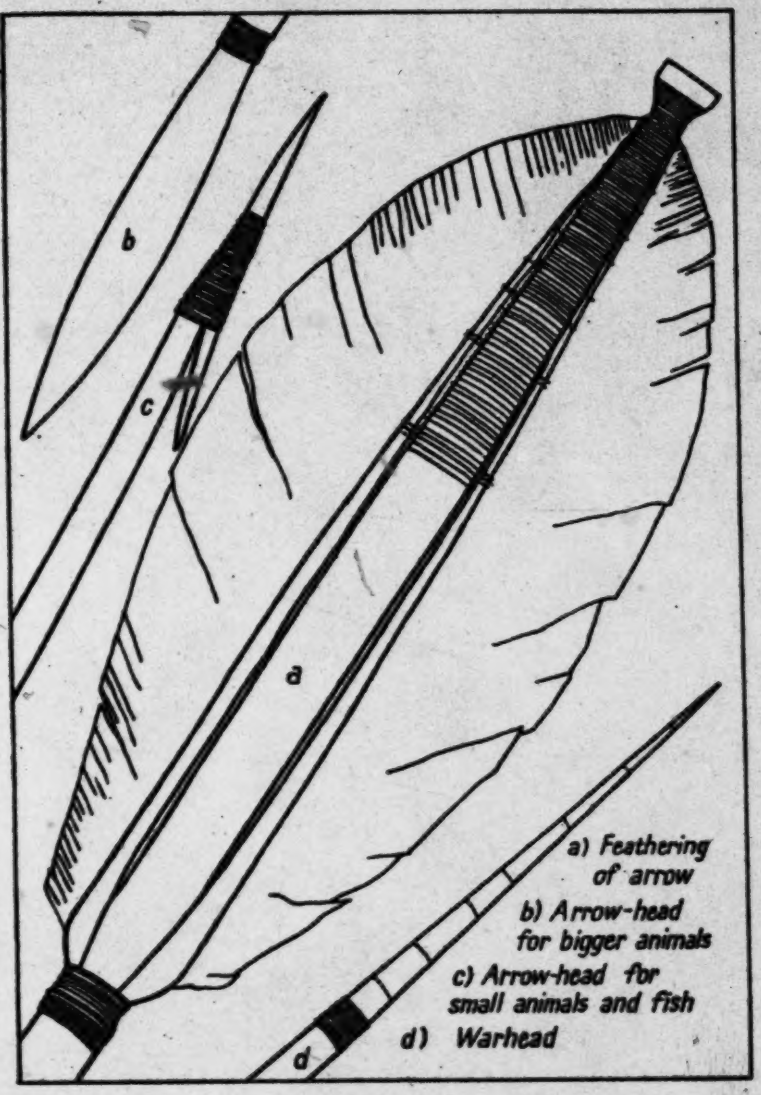
b
c
a
d
a) Feathering of arrow
b) Arrow-head for bigger animals
c) Arrow-head for small animals and fish
d) Warhead

/455 cont./

283 Cotton is spun by means of a hand spindle. This thread is then twisted into three-thread cords.

Various fibers of bark are twisted to make bowstrings or fishing lines. These same fibers of bark are frequently plaited to make hammock strings.

The fiber of a certain plant similar to the pineapple is also extracted and twisted, producing a very tough cord.

284 The knots which the Guaika /Waica/ make are very simple and practical. The timber hitch is employed in all cases in which a flexible cord is used. This includes the stringing of the bows. The hammock is hung using a timber slipknot. This knot is made in such a way that it can be instantly untied by a pull. The square knot is used to join the ends of two cords. In the accompanying Fig. 2, we show drawings of the three knots concerned.

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289 /456/ A band of bark is made for carrying children. First they obtain a stick of the right size, which is beaten with another stick for several days. The scaly outer bark comes off. Finally, the smaller end of the cylindrical bark is inserted into the larger end (of greater diameter), and the two are then firmly sewed together. The result is a band or strip without rough or cutting edges, which remains flexible and useful for many months.

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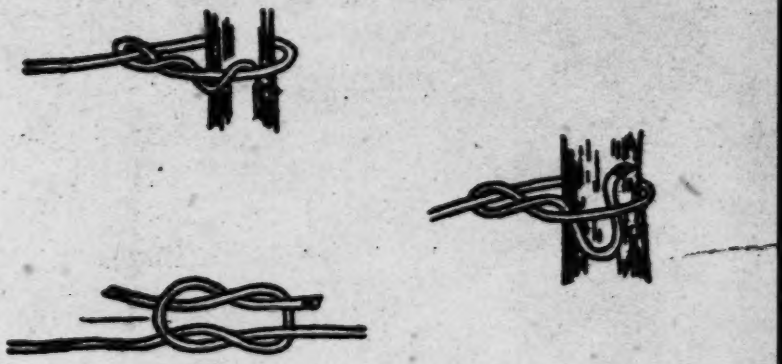

/Fig. 2/

9:Grelier K-5 (1951) 1957 SQ18 Yanoama SQ 18
Waica

[P. 110]

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482
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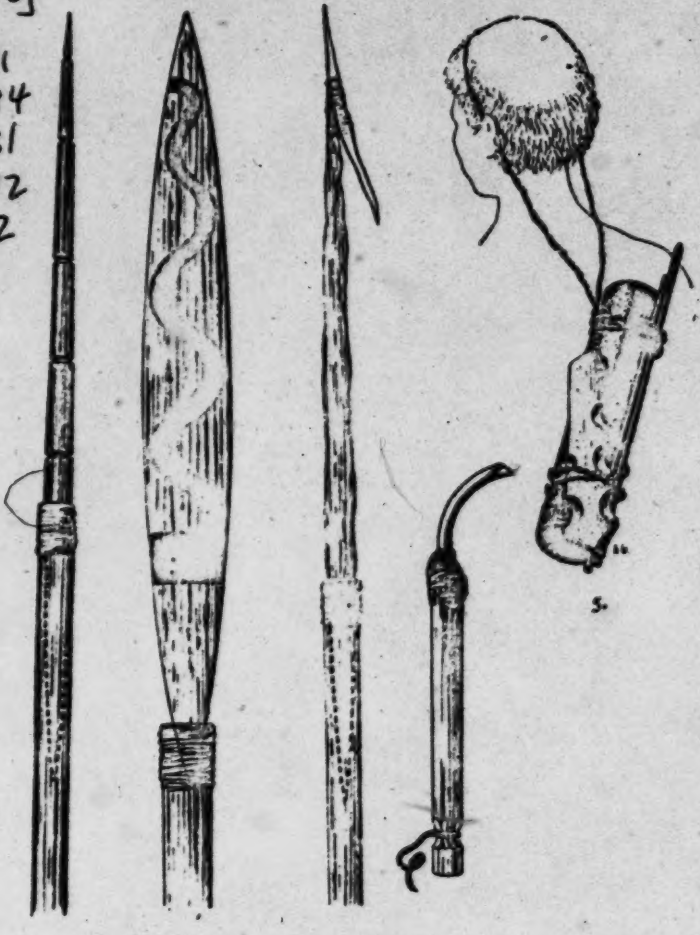

1. 2. 3. 4. 5.

ARROW HEADS

1. Notched point designed to break off in the wound. These points measure from eight to twelve inches in length. 2. Bamboo blade pointed at both ends and therefore reversible. 3. Harpoon point. The bone barb is skilfully bound in position. 4. Small knife; made from the incisor of the capybara and fixed to a wooden handle. The whole measures about six inches. 5. The Waika is rarely separated from his quiver made from the stem of a bamboo in which he also carries his firestick.

278 layer of poison. Sometimes other ingredients are added to the poison to make it stickier and less soluble. Without these ingredients, the poison would be washed off by the rain. As an extra precaution against this, some men wrap a leaf around the curare point after it has been attached to the arrow.

415 411 824 430 239 Arrow-point quivers are made from 2-inch bamboo sections of about 18 inches. The quiver is essentially a tube of wood with a natural joint serving as the bottom of the case. The bamboo grows wild in large stands, and some villages specialize in collecting it, making quivers, and trading them to other groups. A piece of monkey, snake, or jaguar skin, molded to fit over the top prevents water from getting into the tube. It usually contains a dozen or so extra arrow points, fibers for fastening the points to the arrow shaft, a ball of resin used as adhesive, a few splinters of bone used to tip one kind of arrow point, and, occasionally, a magical charm. A fiber or cotton string is tied around the bamboo tube near its top, and a loop is fashioned so that the tube can be worn around the neck. It hangs down the middle of the back.

372 824 The Yąnomamö attach their fire drills and a pair of agouti-tooth knives to the outside of the bamboo quiver. The fire drill is made from the wood of the cocoa tree and consists of one or two 20-inch long, slender shafts, circular in cross section, and a 12-inch long lanceolate-shaped piece of cocoa wood into which have been worn several holes. The latter piece of wood is placed on the ground and held firmly in place by the foot. The tip of the slender shaft is placed into one of the holes, and the shaft is twirled rapidly with the palm of the hands; the heat of the friction ignites the wood dust that results from the spinning tip, and this is immediately transferred to some cotton tinder. The men usually work in pairs to start a fire, as the dust cools off by the time a single man can get his hands back up to the top of the slender shaft to begin another downward twirling motion.

412 237 The agouti-tooth knives are manufactured from the lower incisor of the agouti rodent. The incisors are long, slender, gently curved, and very sharp. The tip of the incisor is shaped like a wedge and is frequently indented. The exterior part of the tooth is much harder than the pith so that a very sharp edge protrudes slightly above the softer, decayed dentine. The Yąnomamö keep the dentine worn down by periodically "sharpening" the tooth; this is accomplished by cutting into a particular kind of reed, which apparently contains a corrosive ingredient that attacks the dentine but does not affect the enamel of the tooth. The base of the tooth is fastened in a short piece of wood 314 284 by a resin adhesive and a fiber wrapping. The completed knife is as sharp as any steel chisel, but because of its small size, its usefulness is limited. It is primarily used to whittle lanceolate arrow points from bamboo, a very time-consuming job.

226 The jungle also provides another kind of poison used by the Yąnomamö to kill fish. The men select a small stream, dam it up, and put the juice of a vine into the water. This stuns the small fish, which then float to the surface where they are scooped up by the women either by handfuls or with loosely woven, shallow baskets (see Fig. 2-2). If the woman is in the middle of the stream, she empties the contents of her basket into her hand and then stores the handful of squirming fish in her mouth until both the basket and her mouth are full. If larger fish are caught, the women bite them behind their heads to kill them and toss them out on the bank. The first one in the stream takes a chance on locating an electric eel; if she is shocked, the others try to locate the eel with sticks and kill it.

244 Many of the Yąnomamö villages have recently obtained bitter manioc, a poisonous
[177] variety that must be leached of its toxic ingredient before it can be eaten. This variety is
[292] grown in large quantities by the Carib-speaking Makiritare Indians–and by rural Vene-
[299] zuelans–and most of it has been introduced to the Yąnomamö recently by missionaries. Where the Yąnomamö are in direct contact with the Makiritare, they have, of course, adopted the crop without the intervention of the missionaries.

Next in importance are three other root crops: taro, sweet potatoes, and mapuey.
[252] All of these resemble potatoes; they are usually boiled, but occasionally they are roasted directly over the coals.

245 The Yąnomamö also cultivate a species of palm tree that produces a large crop
[423] of fruit each February and a much smaller crop in June. Each tree is owned by the individual who planted it, and his rights to the fruit continue even after the garden has been abandoned. It takes about six or seven years for a newly planted tree to produce its first crop, so the Yąnomamö are quite reluctant to move very far away from sites where they possess producing groves of these trees. When they do move, they return each year to collect the peach-palm fruit. They try, as well, to move to an abandoned garden that still has producing peach palms. If thieves have been raiding the unguarded crop, the Yąnomamö may cut the trees down, keeping the wood to make bows. They would sooner destroy an item of personal property than permit others to exploit it without permission.

243 Maize is probably next in importance, but in a special sense. It appears to be cul-
[262] tivated as an emergency crop because its seeds are light and easily transported. A group that must move its garden a long distance can carry large quantities of maize seed and produce a substantial crop in a relatively short period of time. Maize does not, however, under normal circumstances, figure prominently in the daily diet of the Yąnomamö.

Cane for arrow manufacturing is also grown. The mature plant consists of a long, slender, pithy cane that has no joints or branches and is ideally suited for arrow shafts. The Yąnomamö use the cane just as they harvest it. Their arrows are over 6 feet long. Wing feathers from the larger species of wild turkey are used to fletch the arrow. On
[237] each side of the shaft, one feather is tied with finely spun cotton fibers, being attached in such a way that the arrow will spin when it is released; its accuracy is thus improved in the way a bullet's accuracy is improved by rifling in a gun barrel. A nock is carved
[322] from wood with an agouti-tooth knife; it looks very much like a golf-ball tee when finished, except that it is grooved at the large end where it will be fitted to the bowstring.
[314] The nock is inserted in the narrow end of the cane and held fast with pitch adhesive and
[284] a tight wrapping of fine cotton thread. The large end of the cane is not altered if it is to take a curare tip, since it tapers to a fine point and, therefore, blends into the thin curare point. If the point to be mounted is of the lanceolate type, the tip of the cane is cut off at its maximum diameter, wrapped with heavy cord, and the point jammed into the cane pith with considerable force. The fiber wrapping prevents the cane from splitting while the point is being mounted. The finished product is a very handsome
[531] piece of work, and the Yąnomamö are proud of their arrows. They decorate the bamboo points by painting them red and adding black designs, and they attach a few colorful
[422] feathers to the fletched end. A seasoned arrow is a prized possession, in high demand in
[437] the trading network.